

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein at least one of said portions comprises a dissolved non-polymerizable organoiodine compound.

Claim 2. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein said liquid portion comprises a polymerizable organoiodine compound and ~~the polymeric structure of said particulate polymer has a polymeric structure comprising~~comprises covalently bonded residues of a polymerizable organoiodine compound.

Claim 3. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein said liquid portion comprises a polymerizable organoiodine compound and/or ~~the polymeric structure of said particulate polymer has a polymeric structure comprising~~comprises covalently bonded residues of a polymerizable organoiodine compound, wherein said polymerizable organoiodine compound comprises an organoiodine moiety covalently bonded via an amide bond, but not an ester bond, to a polymerizable moiety.

Claim 4. (Original) A bone cement having a chemically homogenized distribution of all components therein.

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Claim 5. (Currently Amended) ~~A—The~~ bone cement as claimed in claim 4, wherein said cement comprises ~~comprising~~ an X-ray contrast agent.

Claim 6. (Currently Amended) ~~A—The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 5, wherein said cement additionally ~~comprising~~ comprises an antibiotic compound.

Claim 7. (Currently Amended) ~~A—The~~ bone cement as claimed in claim 6, wherein said antibiotic compound is selected from the group consisting of gentamicin, colistin, erythromycin, clindamycin, penicillins, norfloxacin and chloramphenicol.

Claim 8. (Currently Amended) ~~A—The~~ bone cement as claimed in ~~either one of claims~~ claim 6 and 7, wherein said antibiotic compound is present in the form of a lipophilic ester.

Claim 9. (Currently Amended) ~~A—The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 8, wherein the concentration of the organoiodine compound within the polymer ~~particles~~ particle portion differs by less than 50% compared to the concentration of the organoiodine within the polymer which is prepared *in situ* from the monomer during use.

Claim 10. (Currently Amended) ~~A—The~~ bone cement as claimed in ~~any one of claims~~ claim 6 to 8, wherein the concentration of the antibiotic compound within the polymer ~~particles~~ particle portion differs by less than 50% compared to the concentration of the organoiodine within the polymer prepared *in situ* from the monomer during use.

Claim 11. (Currently Amended) ~~A—The~~ bone cement as claimed in ~~either of claims~~ claim 9 to 10, wherein the concentration of the antibiotic compound within the polymer particles portion differs by less than 10% compared to the

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concentration of the organoiodine within the polymer prepared in situ from the monomer during use ~~and 10 wherein said concentration difference is less than 100.~~

Claim 12. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any of claims~~ claim 1 to 11, wherein said organoiodine compound is a cross-linking agent and is present in an amount of up to 2% wt of the composition.

Claim 13. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 12, wherein the liquid ~~monomer~~ portion additionally comprises at least one of hydroquinone, growth hormone, BMP or vitamins.

Claim 14. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 13, wherein said liquid ~~monomer~~ phase portion is present in a range of from 25 to 45% wt. of cement.

Claim 15. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 14, wherein said polymer ~~particle~~ phase portion additionally comprises at least one of hydroquinone, growth hormone, BMP or vitamins.

Claim 16. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 15, wherein said polymer particles of said polymer portion have a mode particle size of from 1 to 200 μm .

Claim 17. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 16, wherein said polymer particles of said polymer portions are polydisperse.

Claim 18. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein at least one of said portions comprises a dissolved non-polymerizable organoiodine compound, said kit optionally ~~and preferably~~

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further ~~comprising~~ comprises instructions for the preparation of a bone cement therewith.

Claim 19. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein said liquid portion comprises a polymerizable organoiodine compound and ~~the polymeric structure of said particulate polymer has a~~ polymer structure comprising ~~comprises~~ covalently bonded residues of a polymerizable organoiodine compound, said kit optionally ~~and preferably~~ further ~~comprising~~ comprises instructions for the preparation of a bone cement therewith.

Claim 20. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein said liquid portion comprises a polymerizable organoiodine compound and/or ~~the polymeric structure of said particulate polymer has a~~ polymer structure comprising ~~comprises~~ covalently bonded residues of a polymerizable organoiodine compound, wherein said polymerizable organoiodine compound comprises an organoiodine moiety covalently bonded via an amide bond, but not an ester bond, to a polymerizable moiety.

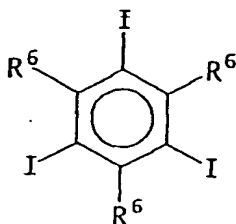
Claim 21. (Original) A bone cement kit providing a bone cement comprising a chemically homogeneous distribution of all components within the final bone cement.

Claim 22. (Currently Amended) ~~A~~ The bone cement kit as claimed in claim 21, wherein said cement comprises ~~comprising~~ an X-ray contrast agent.

Claim 23. (Currently Amended) ~~A~~ The bone cement kit as claimed in ~~either of claims~~ claim 21 ~~and 22~~, wherein said cement additionally ~~comprising~~ comprises an antibiotic agent.

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Claim 24. (Currently Amended) An organoiodine compound of formula IV



wherein each R^6 group which may be the same or different, ~~comprises~~ is an acyloxyalkylcarbonylamino, N-(acyloxyalkylcarbonyl)acyloxyalkylamino, N-acyloxyalkylcarbonyl-N-alkylamino, acyloxyalkylaminocarbonyl, bis(acyloxyalkyl)aminocarbonyl, N-acyloxyalkyl-N-alkylaminocarbonyl, alkoxyalkylaminocarbonyl, N-alkylalkoxyalkylaminocarbonyl, bis(alkoxyalkyl)aminocarbonyl, alkoxyalkylcarbonylamino, N-alkylalkoxyalkylcarbonylamino or N-alkoxyalkylcarbonylalkoxyalkylamino group or a triiodophenyl group attached via a 1 to 10 atom bridge optionally substituted by an acyloxyalkyl, acyloxyalkylcarbonyl, acyloxyalkylamino, acyloxyalkylcarbonylamino, acyloxyalkylaminocarbonyl, alkoxyalkyl, alkoxyalkylcarbonyl, alkoxyalkylamino, alkoxyalkylcarbonylamino, or alkoxyalkylaminocarbonyl group or by a polymerizable group, or one or two R^6 groups is/are a polymerizable group, optionally attached via a 1 to 10 atom bridge; or where one R^6 group is a polymerizable group, and one or both of the remaining R^6 groups ~~may be~~ is an alkylamino, bisalkylamino, alkylcarbonylamino, N-alkyl-alkylcarbonylamino, alkylaminocarbonyl or bis-alkyl-aminocarbonyl group.

Claim 25. (Currently Amended) ~~An~~ The organoiodine compound as claimed in claim 24, wherein each R^6 group

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~~comprises~~ is a triiodophenyl group attached via a 1 to 10 atom bridge composed of bridging atoms selected from O, N and C.

Claim 26. (Currently Amended) A method of producing a bone cement comprising admixing a liquid monomer portion and a particulate polymer portion, ~~characterized in that~~ wherein admixture of said portions is effected under helium.

Claim 27. (Currently Amended) ~~Method~~ A method for preparing ~~the~~ a particulate polymer of ~~the~~ a bone cement, wherein ~~said~~ polymer particles are formed by emulsion polymerization.

Claim 28. (Currently Amended) ~~A~~ The method as claimed in claim 27, wherein said emulsion is oil-in-water.

Claim 29. (Currently Amended) ~~A~~ The method as claimed in ~~either of claims~~ claim 27 ~~and 28~~, wherein ~~the aqueous phase of~~ the emulsion has an aqueous phase additionally ~~comprises~~ comprising an emulsifier.

Claim 30. (Currently Amended) A method of producing polymer particles by emulsion ~~polymerisation~~ polymerization ~~characterized in that~~ wherein salts are added to the aqueous phase.

Claim 31. (Currently Amended) A method of producing polymer particles by emulsion ~~polymerisation~~ polymerization, wherein the pH is adjusted by the addition of acids, bases or by the use of buffers.

Claim 32. (Currently Amended) ~~A~~ The method as claimed in ~~any one of claims~~ claim 27 ~~to 31~~, wherein ~~the polymerization is~~ is effected at a temperature ~~is~~ in the range of from 50 to 100°C.

Claim 33. (Currently Amended) ~~A~~ The method as claimed in claim 32, wherein ~~said~~ polymerization is effected at a ~~temperature is~~ in the range of from 70 to 80°C.

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Claim 34. (Currently Amended) ~~A~~ The method as claimed in ~~any one of claims~~ claim 27 to 33, additionally comprising a ~~polymerisation~~ polymerization initiator.

Claim 35. (Currently Amended) ~~A~~ The method as claimed in claim 34, wherein said polymerization initiator is selected from the group consisting of benzyl peroxide (BPO), 2,2'-azo-bis-isobutyl nitrile (AIBN) and ~~tert.~~ t-butyl peroxybenzoate.

Claim 36. (Currently Amended) ~~A~~ The method for preparing an organoiodine compound as claimed in claim 24, wherein said compound is prepared from triiodophenyl carboxylic acids and amines.

Claim 37. (Currently Amended) ~~A~~ The method as claimed in claim 36, additionally comprising a ~~polymerisation~~ polymerization initiator.

Claim 38. (Currently Amended) ~~A~~ The method as claimed in claim 37, wherein said polymerization initiator is selected from the group consisting of N,N-dimethylp-toluidine, N,N-dimethylaminobenzyl alcohol (DMOH) and N,N-dimethylaminobenzyl oleate (DMAO).

Claim 39. (Currently Amended) ~~A~~ The method as claimed in ~~either of claims~~ claim 37 and 38, wherein said polymerization initiator is present in an amount up to 2% wt. of the composition.

Claim 40. (Currently Amended) A method of affixing a joint prosthesis comprising inserting said prosthesis and a bone cement into a bone cavity, ~~characterized in that~~ wherein said cement is a cement as claimed in ~~any one of claims~~ claim 1 to 3.

Claim 41. (Original) Bone cement characterized in that the mechanical properties regarding the ultimate tensile

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strength and ultimate strain are greater than 10% higher than Palacos® bone.

Claim 42. (New) The bone cement as claimed in claim 9, wherein the concentration of the organoiodine compound within the polymer particles portion differs by less than 10% compared to the concentration of the organoiodine within the polymer prepared *in situ* from the monomer during use.